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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,534	06/10/2005	Wayne D. Frasch	21926	4137

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EXAMINER

SHAW, AMANDA MARIE

ART UNIT	PAPER NUMBER
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1634

MAIL DATE	DELIVERY MODE
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10/28/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<p align="center">Advisory Action Before the Filing of an Appeal Brief</p>	<p>Application No. 10/538,534</p>	<p>Applicant(s) FRASCH ET AL.</p>	
	<p>Examiner AMANDA SHAW</p>	<p>Art Unit 1634</p>	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 14 October 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: _____.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____.
13. ☐ Other: _____.

/Carla Myers/
Primary Examiner, Art Unit 1634

Continuation of 11. does NOT place the application in condition for allowance because: Regarding the 103 rejections based on the combination of Yasuda and Sonnichsen the Applicants first summarize the teachings of Yasuda and Sonnichsen and specifically point out that Sonnichsen is not involved with rotation or movement of any kind and is not concerned with detection of motion. Then they argue that one of skill in the art reading Yasuda (which is involved with motion) would not turn to Sonnichsen (which is not involved with motion). As such there is no motivation to combine these references. Finally they submit that improper hindsight has crept into the analysis.

These arguments have been fully considered but are not persuasive because both of the references being relied upon are drawn to nanoparticle based assays. Yasuda teaches a method drawn to detecting rotational motion using gold nanospheres. Sonnichsen is being relied upon to teach what is missing in the methodology of Yasuda. The limitation that Yasuda does not teach is the use of a nanoparticle that has a first surface and a second surface wherein the first surface has greater area than the second surface (i.e. a nanorod). Sonnichsen also teaches a method which uses nanoparticles. Sonnichsen specifically addresses the properties of gold nanorods and gold nanospheres. Since both Yasuda and Sonnichsen teach nanoparticle based assays the argument that the two references are incompatible is misleading. In the instant case it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the method of Yasuda by substituting a gold nanorod for a gold nanosphere based on the teachings of Sonnichsen. After reading Sonnichsen one of skill in the art would realize that it would be possible to use gold nanorods to observe rotation motion because they have two different surface plasmon resonances which make it possible to observe alternating first and second wavelengths of light as the nanoparticles move from a first position (i.e. where the light is polarized along the long axis) to a second position (i.e. where the light is polarized along the short axis). Further Sonnichsen teaches that nanorods are useful for a wide range of optical applications (page 4, col 2). Therefore it would have been obvious to use the nanorods in other optical applications such as for detecting motion and based on the teachings of Sonnichsen the substitution of a nanosphere for a nanorod would have yielded predictable results. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In the instant case both Yasuda and Sonnichsen teach nanoparticle based assays and an artisan of ordinary skill in the art would have found it obvious to combine these teachings.

Next the Applicants argue that even if one did swap Yasuda's bead for one of Sonnichsen's nanorods, there would be no reason whatsoever to alter Yasuda's frame imaging techniques. The Applicants cite Sonnichsen for teaching that the "rods appear as bright in the microscopic measurement as spheres of much larger volume". Therefore they argue that even if one were to attach a rod to the method of Yasuda one would do so for the purposes of enhanced brightness for frame "spot" imaging.

This argument has been fully considered but is not persuasive. In the instant case Pettingell discloses using polarizing microscopes which use polarizer's to look at anisotropic materials (e.g., materials that have a first and second axis such as nanorods) (Column 3, lines 10-15). The polarizing filters are used to separate the first and second wavelengths of light generated by anisotropic materials. Thus after the substitution of a non anisotropic material (i.e. the bead of Yasuda) for an anisotropic material (i.e. the nanorod of Sonnichsen) it would have been obvious to look at other observation techniques particularly ones that are used for looking at anisotropic materials since nanorods are anisotropic. Since Pettingell teaches that polarizer's were well known in the art at the time of the invention for looking at anisotropic materials it would be obvious to one of skill in the art to modify the method of Yasuda and Sonnichsen by using a polarizing microscope to observe the rotational movement of a nanorod.

Further it is noted for the record that the Applicants have filed a CRF copy of the Sequence Listing. The CRF has been reviewed and has been entered. However the Applicants have not filed the required paper copy of the Sequence Listing or the statement saying that the content of the paper and the CRF are the same. Additionally Applicants are reminded that where the description of a patent application discuss a sequence that is set forth in the "Sequence Listing", reference must be made to the sequence by use of a sequence identifier, preceded by "SEQ ID NO:" in the text of the description even if the sequence is also embedded in the text. Therefore Applicants are required to identify the nucleic acid sequence in Fig 4 by its SEQ ID NO: in either the brief description of the drawings or the drawings themselves.